

Interreg Mediterranean



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SHAREMED

Sharing and enhancing capabilities to address environmental threats in the Mediterranean sea

Coordinator: Cosimo Solidoro - OGS

Programme co-financed by the
European Regional Development Fund

Programme cofinancé par le Fonds
européen de développement régional

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SHAREMED strat project

GOAL:

increase the capability of regional, subregional, and local authorities and of research community to assess and address hazards related to pollution and environmental threats in Mediterranean transnational waters

HOW:

- enhancing, observing & assessing capabilities
- sharing knowledge, observation and technologies
- building common frameworks, tools and services
- roadmap and action plans



3 types of target groups and stakeholders by 3 spatial scales (med, study site, local)

A Stakeholders **needing** observing & assessing capabilities

B Institutions already **managing** observing infrastructured and willing to share and exchange (includes local and regional authorities and organizations in charge of environmental threats, i.e. those **offering** the services)

C Experts able to provide suggestion/ knowledge /practice on how to enhance obs & assess capabilities (includes scientific community, i.e. **advicing**)

SHAREMED challenge

- to design a transnational system of systems for observing and assessing
- to test its implementation in several test area

not really new:

but how come it is still to be done ???

technological challenge (scientific community)

governance challenge (?who should be in charge?)

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ENHANCE OBSERVING CAPABILITIES

NETWORK of transnational systems of HF radar for surface current; harmonization; data assimilation

***Biological dimension** : visual observation & molecular methods (eDNA & metabarcoding)*

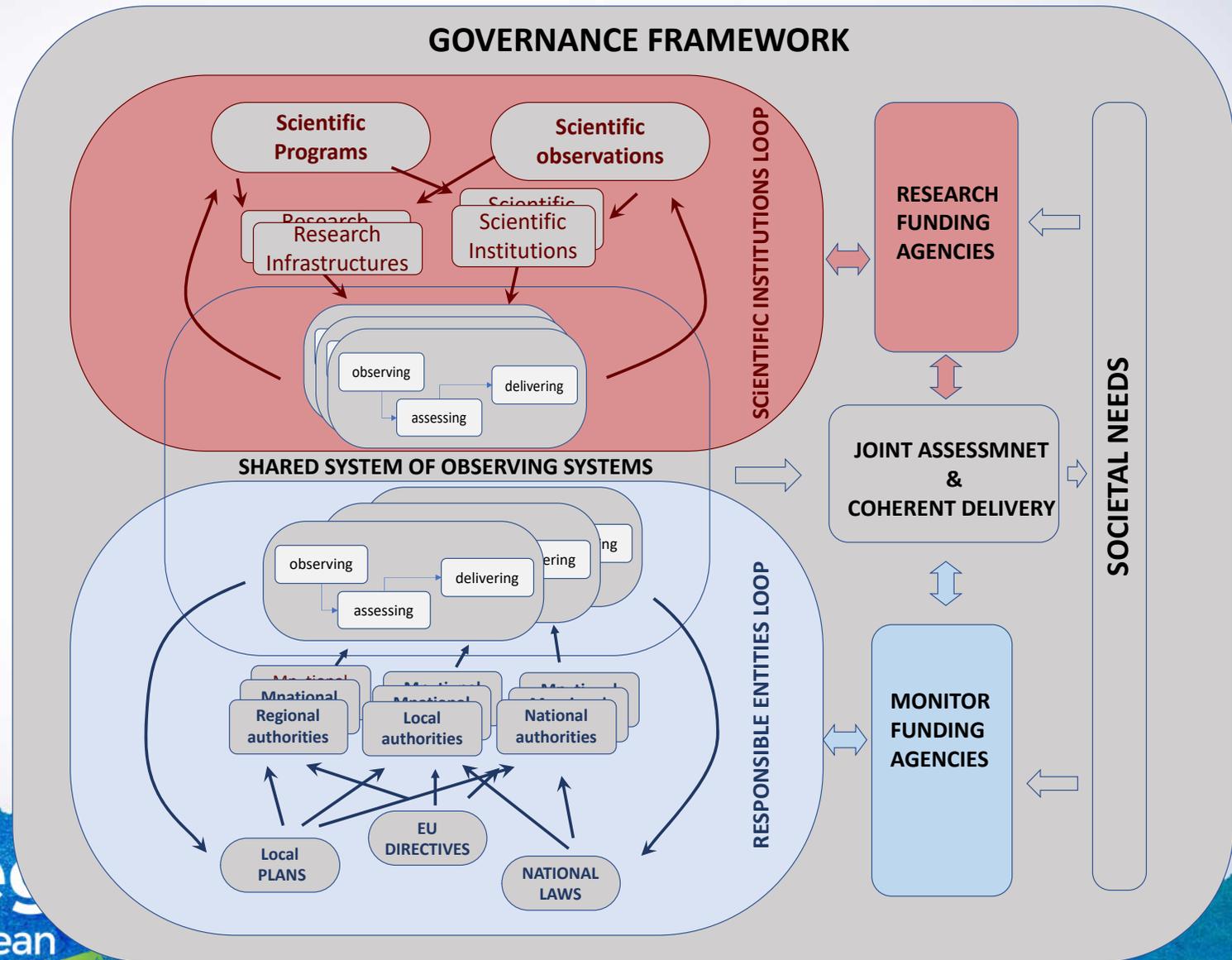
New high resolutions satellite products

*Relocatable high res phy & biogeochemical short term **forecast systems***

Can one *really* integrate systems managed by different authorities?

(harmonize agenda & align objective; share ownerships)

multi-scale
multi-goal
m-purpose



SHAREMED Action sites

*three transnational sites:
NorthAdriatic ,
NorthWestMeD,
Sicily Channel
plus Mediterranean scale*



FRAMEWORKS for *sharing, consolidation, integration, harmonization* of existing information, data, technology, infrastructure and expertise

DESIGN transnational *systems of observing systems and marine modelling frameworks*, build and implemented for each site

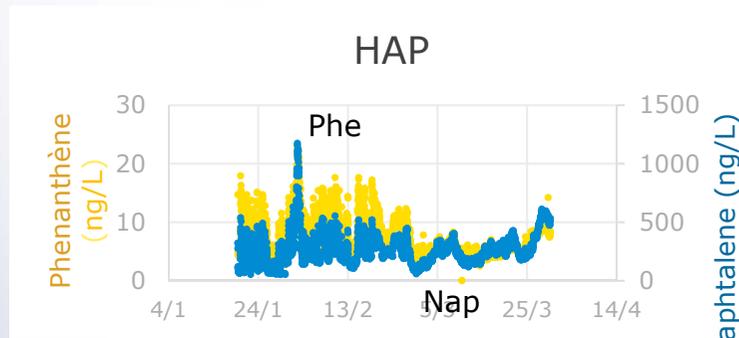
- > Shared monitoring capabilities
- > Shared operational models
- > Shared webportals
- > Shared Atlas

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Enhance and expand monitoring capabilities (WP 3.3)

Development of a strategy to acquire time series of organic and inorganic contaminants

The objective is to test the strategy of measuring time series of contaminants and develop a specific and adapted protocol as part of improvement of new observation technologies and make them ready for operational use



Site MISTRAL

Rhône mouth and Gulf of Fos



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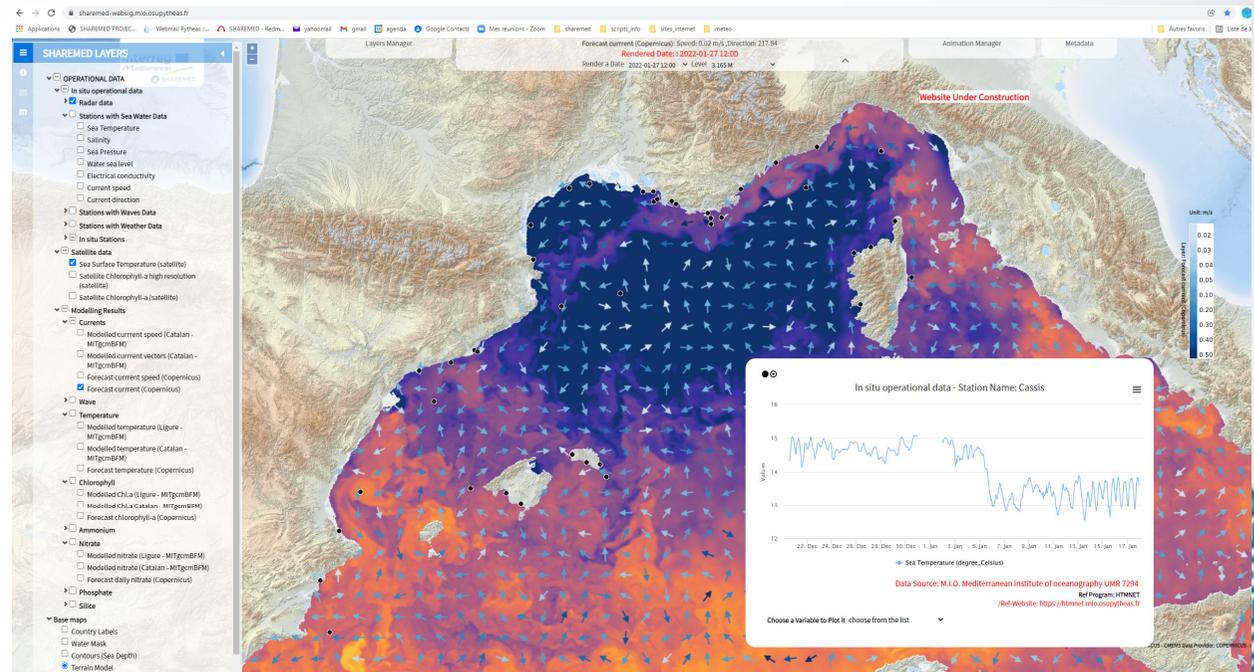
SHAREMED: North-west Med, Adratic, Sicily channels

<https://sharemed-websig.mio.osupytheas.fr/>

1) To develop a webGIS in order to visualize marine operational data (with simple and intuitive interface)

2) To add results from SHAREMED modelling activities on NWMED

3) To add maps from the SHAREMED Atlas activities

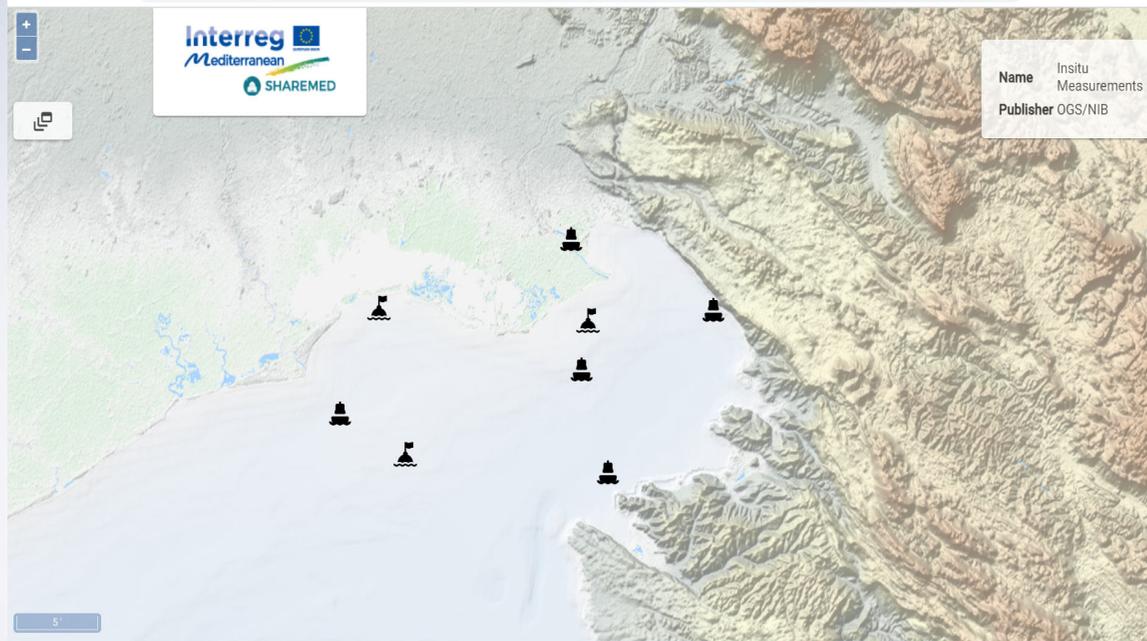


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- Near-real time data from *in situ* marine buoys
- Currents from *coastal radar-HF*
- Near-real time *satellite products*
- Simulations outputs from *forecast models*, including **SHAREMED** models

SHAREMED Northern Adriatic – Study Site

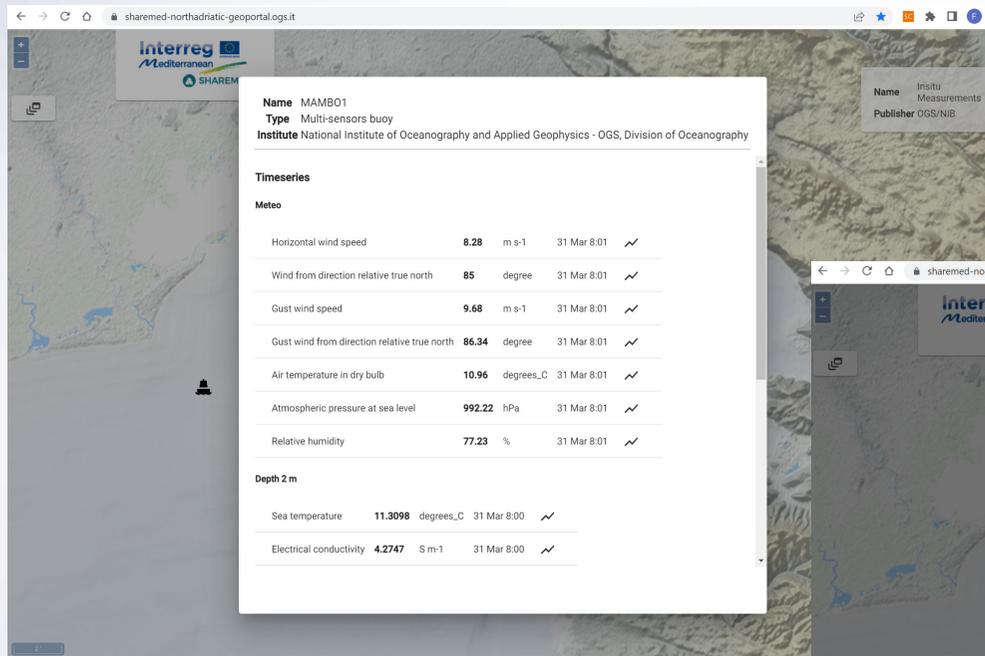
<https://sharemed-northadriatic-geoportal.ogs.it/>



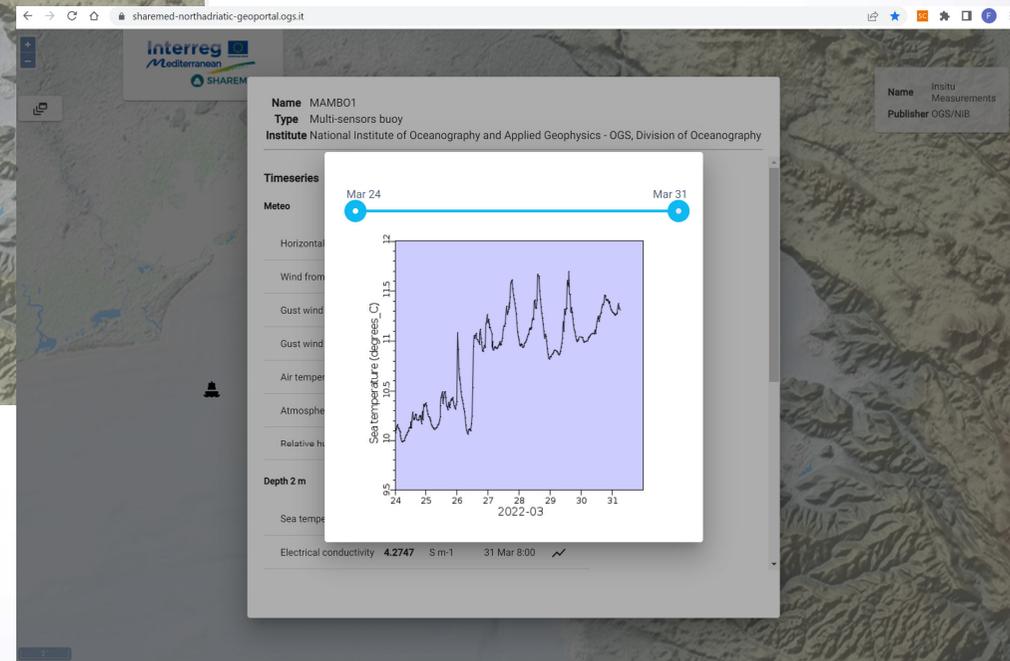
Layer available:

- Insitu real time data
- Model
- HF Radar maps
- Satellite product maps

The Northern Adriatic – Geoportal In situ measurements

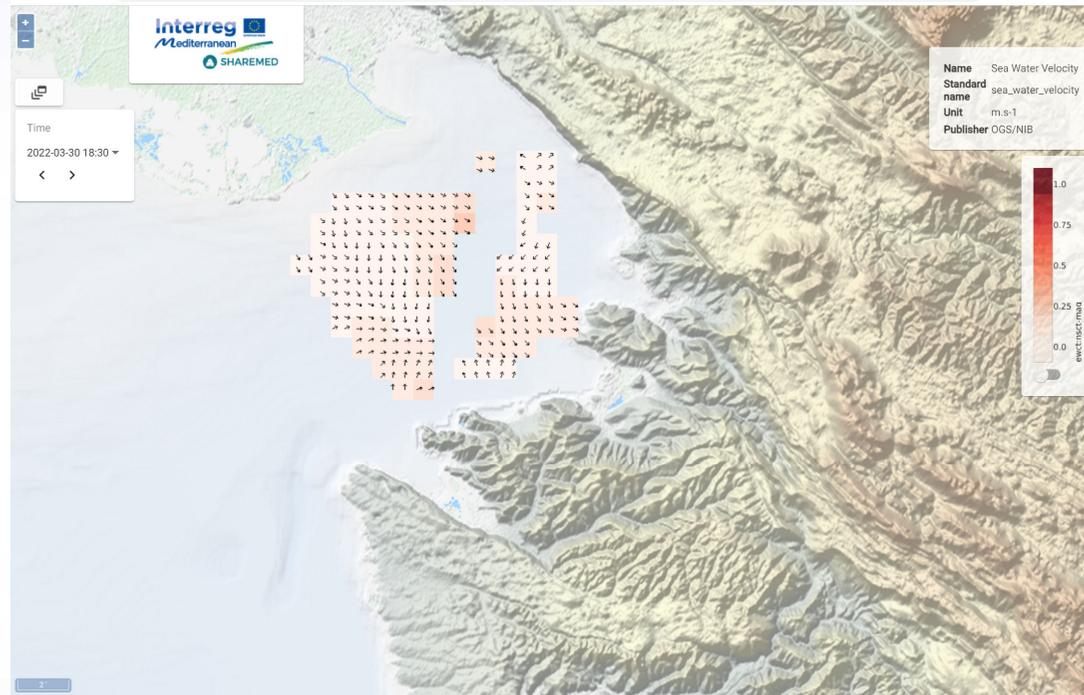


Time series sea temperature (last week) from MAMBO1 - Miramare

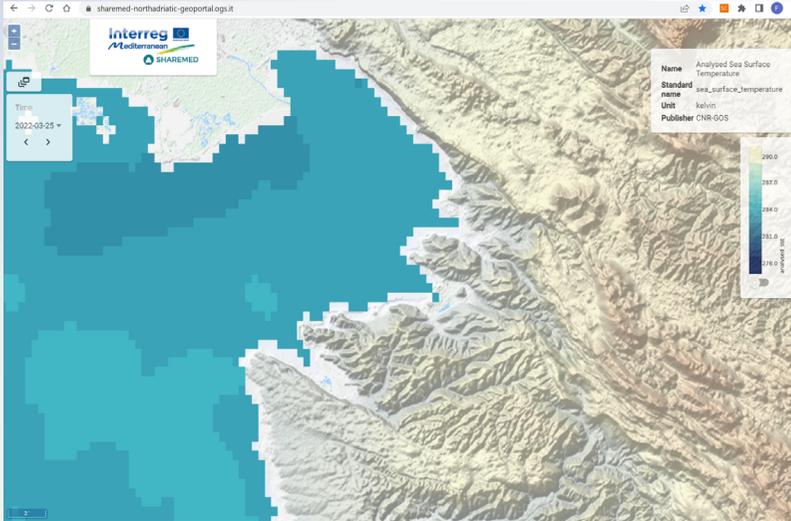


Latest data acquired from
MAMBO1 - Miramare

The Northern Adriatic – Geoportal Surface Current Maps

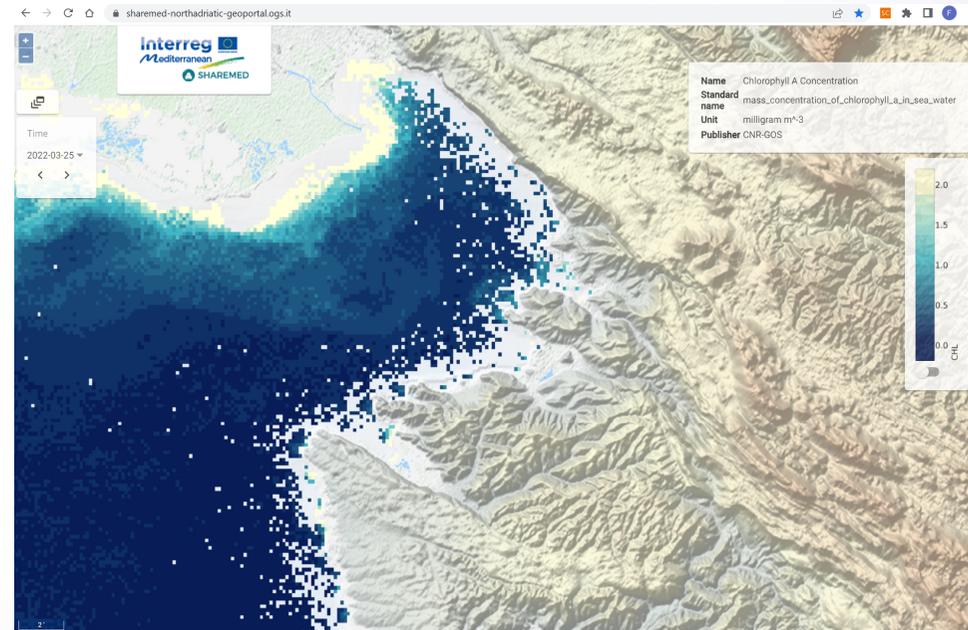


Real time - Surface Current Map from HF - Radar

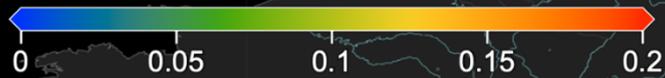


Sea Surface Temperature from Satellite Images

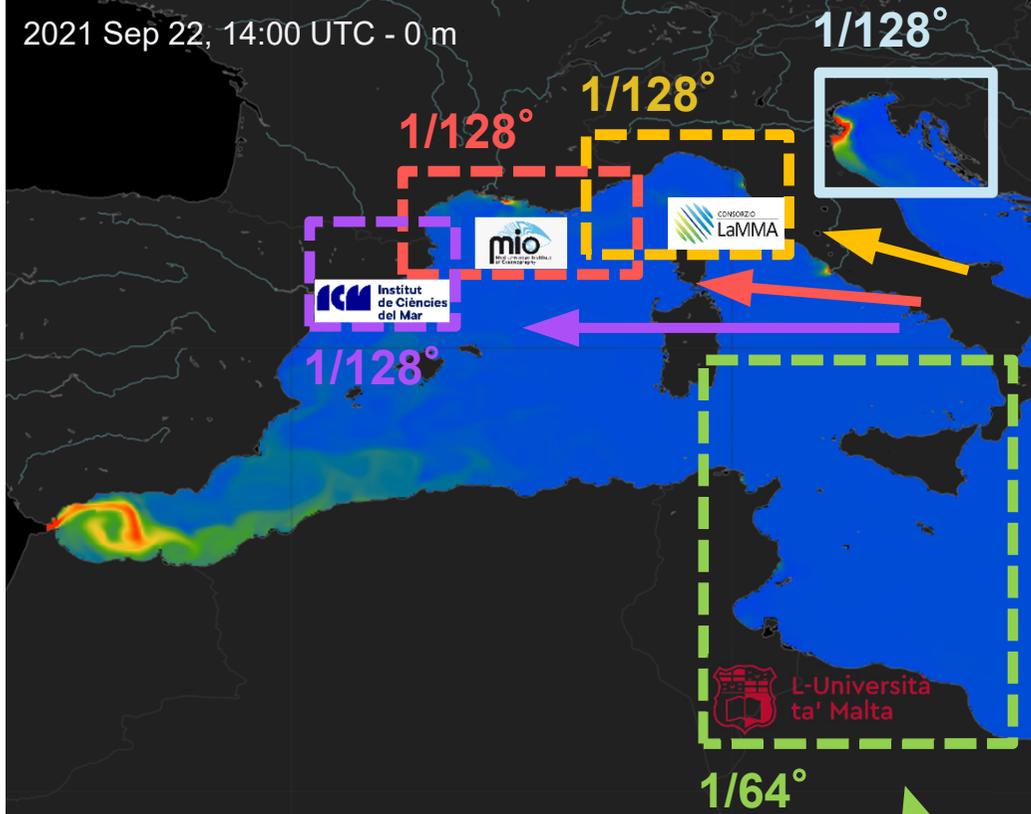
Chlorophyll A Concentration from Satellite Images



Mole concentration of phosphate in sea water [mmol/m³]

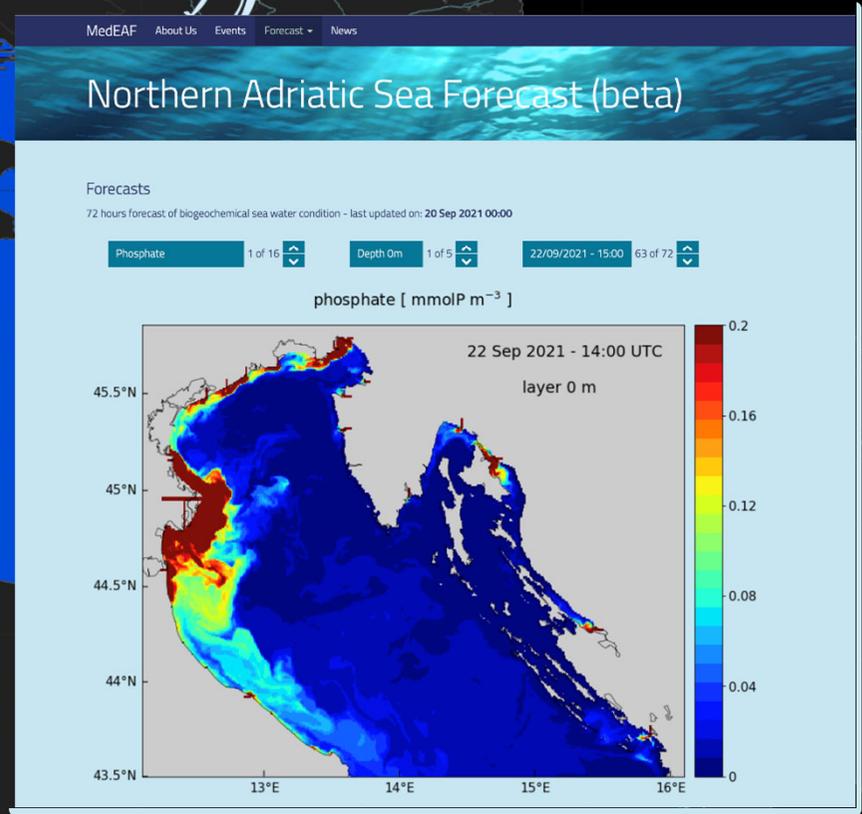


2021 Sep 22, 14:00 UTC - 0 m



background image credit:

My Ocean
by Copernicus Marine Service



Development of a relocatable short-term forecasting system for coastal areas

<http://medeaf.ogs.it/adriatic>

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Atlas of ecosystem status, pressures and hazard index

PRESSURES

HAZARD

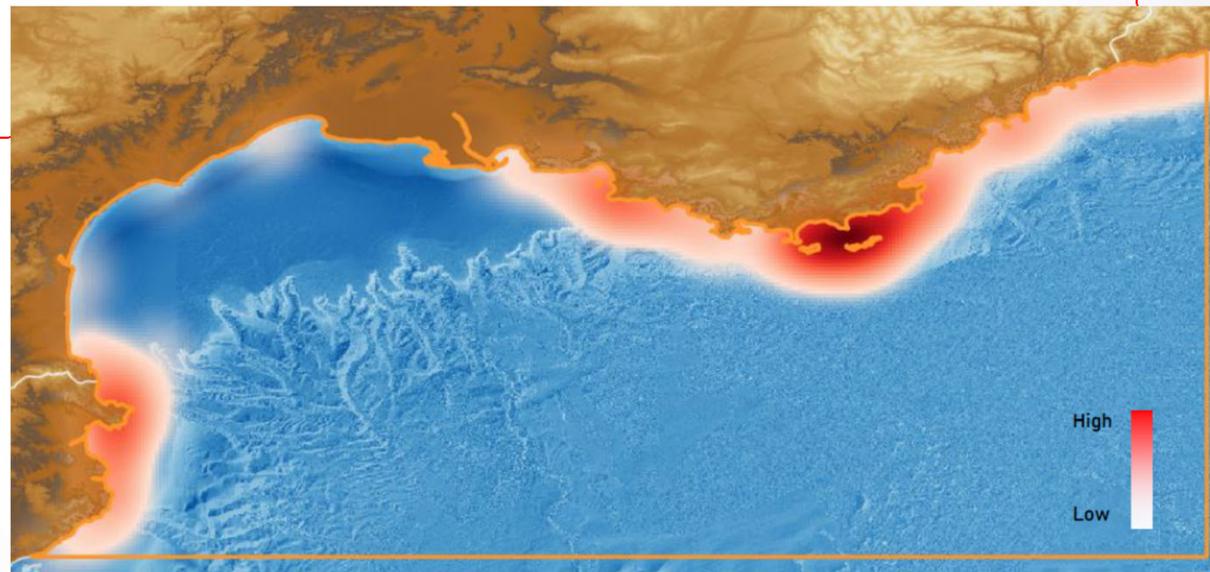
EXPOSURE

VULNERABILITY

RISK

- Oil spill hazard from main shipping routes
- Potential hazard from major rivers discharge
- Thermal shocks and occurrence of marine heatwaves
- Distrophic events
- Chemical contamination

risk map based on layers including location of ghostnets, MPA, habitats



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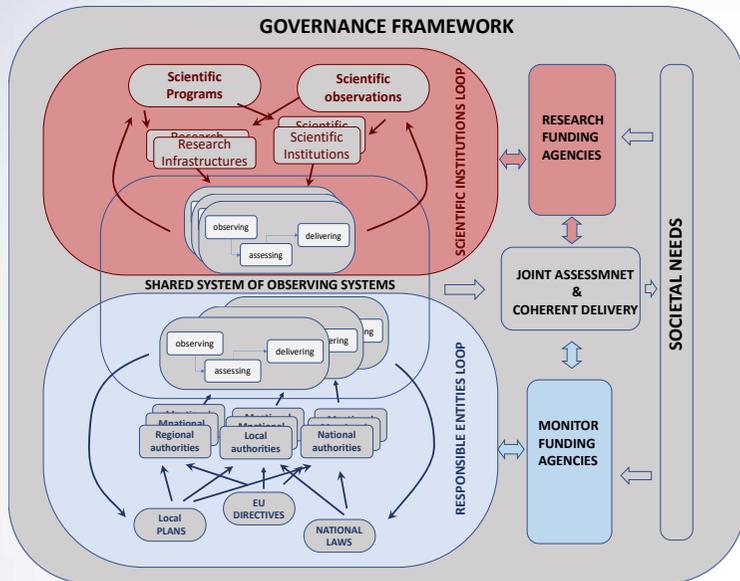
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ALL GOODS?.....

..... LESSON FROM **FAILURES**



NO (signed) PROTOCOL/MOU FOR:

- *JOINT ASSESSMENT*
- *JOINT DELIVERY*
- *JOINT MANAGEMENT*

*«easy» to harmonize agenda
difficult to align objective
impossible to share ownerships*

need to EMPOWER the table

separate funding channels

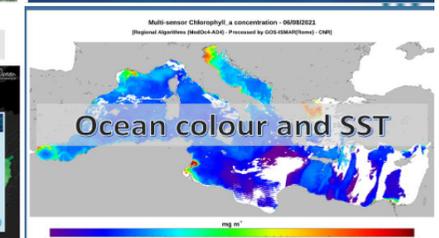
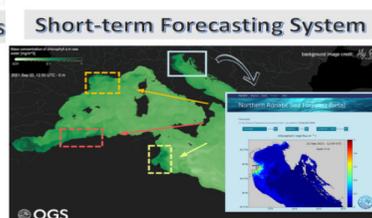
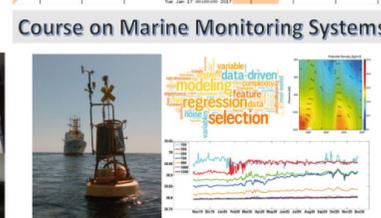
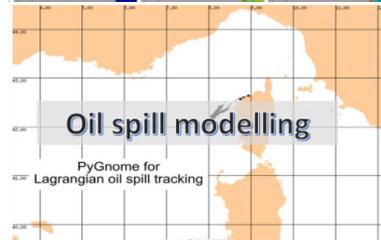
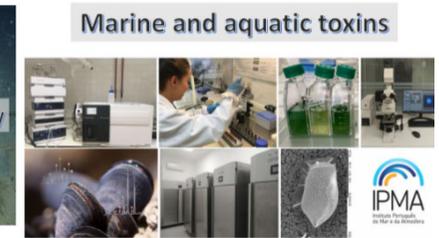
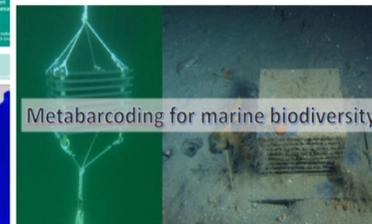
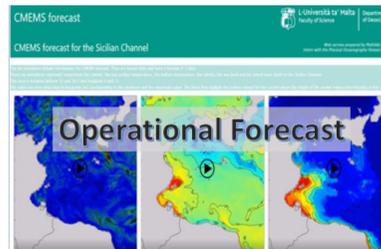
(need to have a single agency?)

*need to sustain the activity for a
LONGER period, so to showcase results*

Transnational on demand actions

**IMPLEMENT A SHAREMED RESULT IN YOUR SITE:
on demand trans national access**

**fund and support
to try it at your
own site!**



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